



DARK ENERGY
SURVEY

PreCam Analysis Plans

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PreCam Observing Run Wrap-up Telecon

27 January 2011



Caveats I

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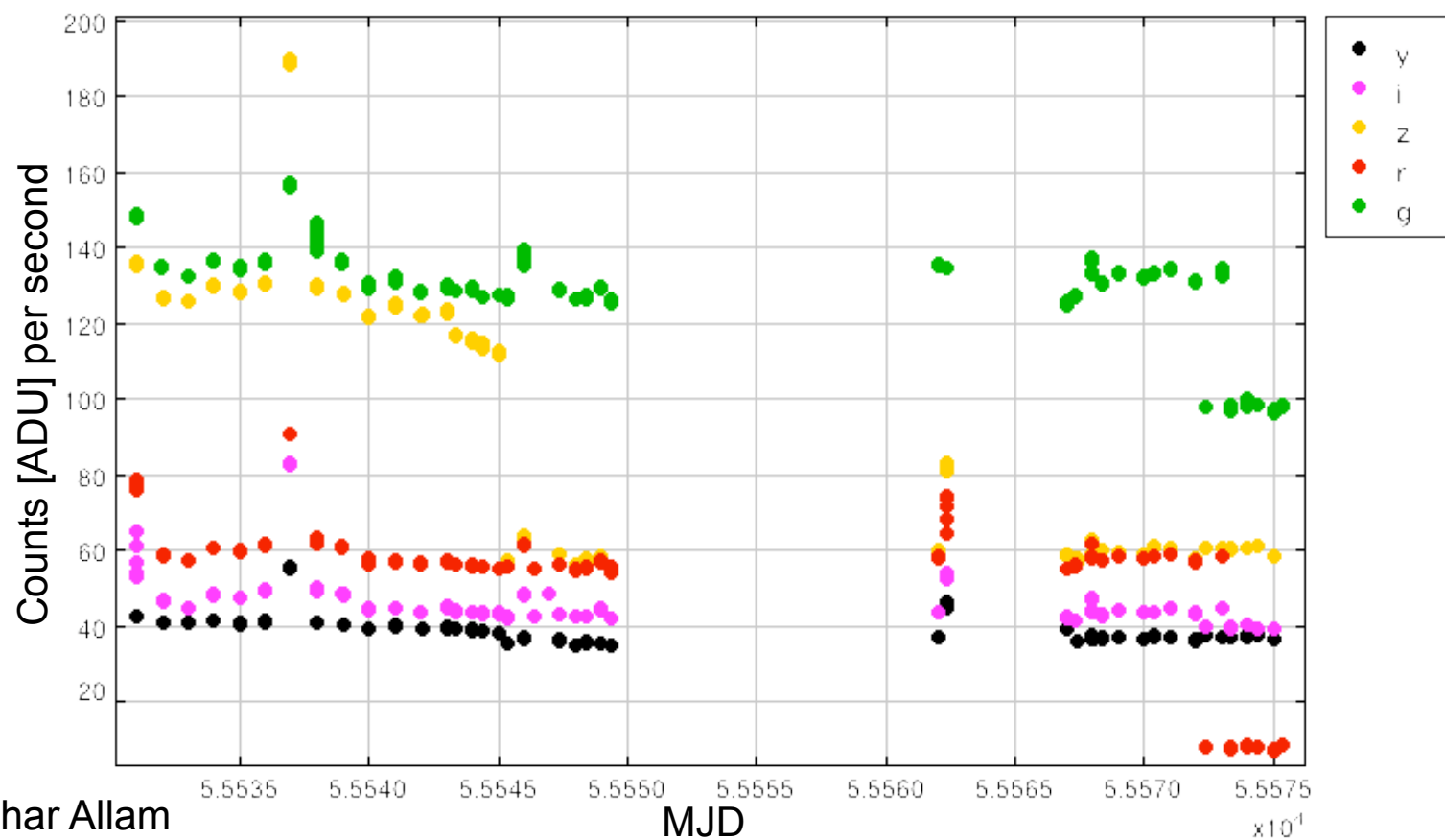
1. PreCam survey footprint observations from ObsTac started around 25 Nov 2010 UT, but data before then are also useful for covering the footprint.
2. FITS header content is variable.
 - a. Data taken after about 15 Dec 2010 UT have pretty stable FITS headers
 - b. Data taken between 3 Dec 2010 UT and about 14 Dec 2010 also have pretty stable FITS headers, but with somewhat less information.
 - c. Data taken between about 17 Nov 2010 and 1 Dec 2010 have all the necessary information, but improve with time.
 - d. The RA and DEC info for 2 Dec 2010 UT suffer from a bug that existed briefly in the observing scripts. Kyler has identified which fields are affected and how to correct them, but the FITS headers for this night have not been corrected (it is a pretty arduous task, but do-able).
3. Dome flats taken in the afternoon may be saturated due to light leaks in the Curtis-Schmidt dome.
 - a. Starting 13 Dec 2010, dome flats were only performed in the evening (after the Curtis-Schmidt was in the shadow of the 1.5m telescope's dome) and in the morning (before sunrise).



Caveats II

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4. Horizontal banding and horizontal streaking
5. Occasional dome occlusions (esp. for airmass $X > 2$ observations)
6. Long-term variability of dome flats?



Credit: Sahar Allam

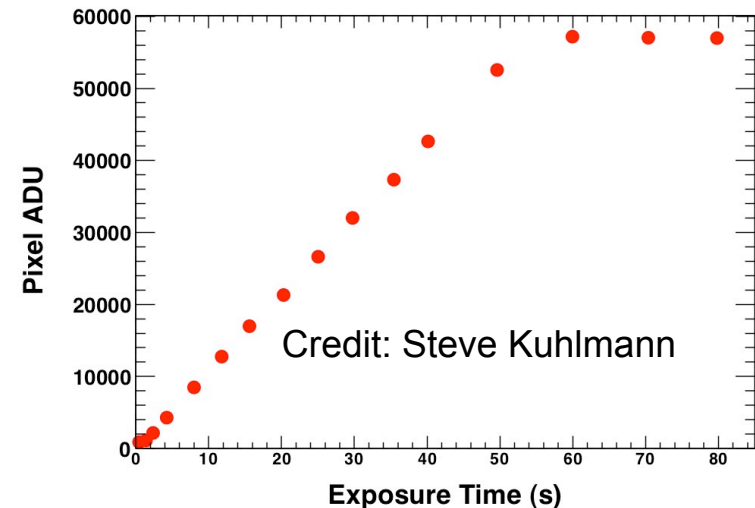


Analysis of Commissioning Tests

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See <http://sites.google.com/site/precamsurvey/home/observing-plan/commissioning-and-periodic-tests>

1. Dome Flat Linearity Test
2. Dome Flat Bad Pixel Map
3. Dome Flat Shutter Map
4. BD+17 4708 Measurement
5. Measurement of other Spectrophotometric Standards in PreCam
6. Star Flats Grid Test
7. Stellar Linearity Test and Shutter Map Measurement
8. Cross-Talk Measurement
9. Astrometry Test
10. Scattered Light Tests (Lunar and Stellar)





Quality Assurance

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1. Biases vs. time
2. Darks vs. time
3. Dome Flats vs. time
4. Vignetting vs. time
5. Focus vs. time and vs. temperature
6. Etc.



SDSS Stripe 82 (DEC=0)

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1. Already well calibrated in SDSS ugriz and in UKIDSS Y
2. Match stars in PreCam Stripe 82 images with SDSS and UKIDSS data
3. DES-SDSS and DES-UKIDSS photometric transformation equations.
4. Quick star flats: compare DES mags with SDSS mags as a function of position on PreCam focal plane.
5. Astrometry against SDSS stars.
6. ...



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Calibration

1. Nightly calibrations
2. Global Relative calibrations
3. Global Absolute calibrations